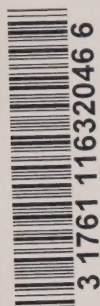


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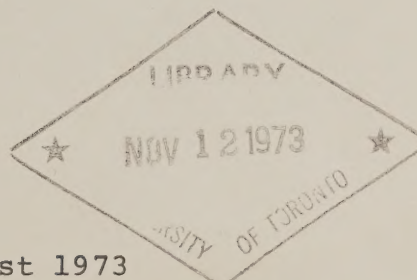
ANALYTICAL AND TECHNICAL MEMORANDUM

No. 8

INTRAPROVINCIAL MIGRATION STREAMS IN QUEBEC AND ONTARIO 1956 - 1961

by

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Demographic Analysis and Research
CENSUS FIELD



Ottawa, August 1973

INTRAPROVINCIAL MIGRATION STREAMS IN QUEBEC AND ONTARIO

1956 - 1961



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INTRAPROVINCIAL MIGRATION STREAMS IN QUEBEC AND ONTARIO, 1956-1961

Résumé

On trouvera dans le présent rapport de recherches une analyse comparative de la migration intraprovinciale au Québec et en Ontario pour la période 1956-1961. La plupart des données utilisées dans cette étude proviennent de tableaux non publiés du recensement canadien de 1961.

Après une brève évaluation des données, les auteurs analysent le phénomène migratoire en établissant un rapprochement entre les nombres respectifs de migrants dans chacune des deux provinces, de même qu'entre certaines de leurs caractéristiques démographiques respectives: l'âge, le sexe et l'état matrimonial.

Pour chacune des deux provinces, soixante courants migratoires ont été étudiés entre six genres de localités définies selon la taille de la population et le type d'habitat. Un relevé des principaux courants migratoires ainsi que le calcul d'"indices d'attraction" ont permis de mesurer le degré d'attraction exercé par chacune d'elles. On s'est ainsi rendu compte que dans les deux provinces étudiées, les zones rurales non agricoles ont réalisé des gains migratoires aux dépens des autres régions. Grâce aux indices calculés, on a pu constater l'attraction plus forte exercée par les zones rurales non agricoles. Ce sont les grands centres urbains et les zones rurales qui semblent les moins attirants.

Abstract

The paper analyses and compares intraprovincial migration in Quebec and Ontario for the period 1956-1961. Most of the analysis is based on the unpublished migration tabulations from the 1961 Census of Canada.

The document starts with a brief evaluation of the migration data, followed by a discussion on the relative volume and the demographic composition of migrants in the two provinces, such as age, sex and marital status.

The main part of the paper is devoted to the analysis of sixty migration streams to and from six different types of localities which are classified by urban size groups, rural non-farm and rural farm areas in each province. The principal migration streams are identified and the relative attraction of each area type is examined by calculating 'indices of attraction'. These indices show that the attraction was highest for the rural non-farm areas and lowest for the larger urban centres and the farm areas.

Intraprovincial Migration Streams in Quebec and Ontario, 1956-1961*

1. Introduction

An important gap in migration studies for Canada is the lack of attention to the analysis of intraprovincial migration (migration between geographic areas within a province) although it forms a major portion of the total volume of internal migration. Because of the special programmes and policies by the federal, provincial and municipal governments for regional economic development, there is an increasing demand for information on the volume, directions and composition of migration within and between the provinces. In developing the regional planning models, it is essential to make reasonable assumptions about the rates and composition of migration flows and the ways in which these flows are influenced by economic and social forces. Of the limited data sources that exist on internal migration, census provides by far the most comprehensive data base on the pattern of migration and the characteristics of migrants in a specified period of time at the sub-provincial level. For the first time in the census history of Canada, the 1961 Census data provided a mass of time-oriented data on various types of internal migration. The data were obtained by asking one in five of the respondents aged five years and over in 1961 where he lived five years ago, i.e., June 1, 1956. Comparison of the area in which the person lived at the time of the census versus five years previously, provided the migration data. The present study is an attempt to make a comparative analysis of migration in Quebec and Ontario using the 1961 Census data.

The main considerations in confining the study to Quebec and Ontario were: (i) the practical difficulties in carrying out an in-depth analysis of migration for all the provinces in one paper; (ii) the geographic proximity and numerical importance of these provinces with more than 60 per cent of the Canadian population; (iii) the differences in their respective population compositions; and (iv) the relatively high mobility of population in the two provinces. During the five-year period 1956-61, close to half of the Canadian population (about 7 million) 5 years and over in 1961 changed dwellings, that is, 45.1 per cent of the male and 45.8 per cent of the female population. Quebec and Ontario accounted for 64.5 per cent of the 7 million persons who moved: nearly two million persons in Quebec and more than two and a half million in Ontario.

* The material for this paper is taken from M. Amyot's unpublished M.A. thesis, "Les courants migratoires intraprovinciaux au Québec et en Ontario, 1956-1961" (Intraprovincial Migration Streams in Quebec and Ontario, 1956-1961) submitted to the Faculté des sciences sociales, Département de démographie, Université de Montréal in April 1970. Most of the work for the thesis was done while Mr. Amyot was working as summer professional with the Demographic Analysis and Research Section, Census Branch. Thanks are due to Professor Hubert Charbonneau, Département de démographie, Université de Montréal, for his direction in writing the thesis. The authors are solely responsible for any errors or short-comings that may appear in the paper.

The paper consists of 6 sections including the introductory and concluding sections. Section 2 deals with a brief evaluation of the data and some methodological problems. In the third section, the discussion is focussed on the relative volume and demographic composition of migrants such as age, sex, and marital status in the two provinces. In section 4, the main focus is on the flow of intraprovincial migrants (intermunicipal) from one class of locality to another during 1956-61 (60 streams for each province). In section 5 the discussion is focussed on the attraction of different areas while in section 6 a summary of the findings is given.

The analysis done here is far from exhaustive and has not covered many aspects. A considerable body of data available on the number of migrants cross-classified by a variety of characteristics such as language, occupation, religion, education, and birthplace of in-migrants remain to be explored. It is hoped, however, that the present study along with the other major studies based on 1961 Census data (George, 1970; Stone, 1969; and Stone, 1971) will form a basis and pave the way for a more intensive analysis of migration at a micro-level using the 1971 Census data.

2. Data Sources and Appraisal

As stated in the previous section, the migration statistics used for the study were collected in the 1961 Census of Canada on a 20 per cent sample of persons five years and over on June 1, 1961 residing in private households. The data have certain limitations which should be kept in mind while interpreting them. These include the exclusion of population such as those living in collective-type households, the problem of the "not stated categories", the possibility of sampling error, and the unknown multiple moves (for review of the data, see Wargon, 1968; Stone, 1969, Appendix B; and George, 1970, Chapter 2). The main general conclusion of the appraisal of the data is that the total mobility shown by these data is an underestimate. "Thus, the data do not directly reflect the mobility of persons who died or left Canada between June 1, 1956 and June 1, 1961 and included only a single move by persons who moved more than once" (George, 1970, p. 9).

The principal elements in the limitation of the 1961 migration data are mentioned above. It is proposed to amplify some of these limitations here in the context of intraprovincial migration analysis attempted in the present study.

The limitation of the data arising from the failure to record multiple movements is mentioned earlier. This affects not only the estimate of total mobility of the population, but also the estimate of the type of mobility such as rural urban, rural farm to non-farm, etc. Take for example a person who lived in a rural farm area on June 1, 1956 and moved in 1960 to a small town and moved again, before the 1961 Census, to a city with more than 100,000 population. In the census his movement will be recorded

as a move from a rural farm to a city between 1956 and 1961 and his movement cannot be distinguished from the movement of a person who moved directly from a rural farm to a big city.

It has been mentioned that certain types of population are not included in the sample used for collecting the data. The exclusion of these groups has probably caused some variation in the distribution of population by certain characteristics such as age and marital status. The differences in the marital status distribution of the population according to the total count and sample count for Canada, Quebec and Ontario are shown in Table 1.

TABLE 1. Percentage of Population by Marital Status: Total Count and Sample, Canada, Quebec and Ontario, 1961

Marital status	Canada		Quebec		Ontario	
	Total	Sample	Total	Sample	Total	Sample
Single	26.5	24.8	32.0	29.9	23.0	21.7
Married	66.6	68.6	62.2	64.6	69.6	71.2
Widowed and divorced ..	6.9	6.6	5.8	5.5	7.4	7.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Unpublished migration tabulations, 1961 Census.

The sample over-estimated the married population and underestimated the two other groups, particularly the single.

One general limitation of migration data from the census is that the characteristics of migrants reported refer to the end of the migration period, i.e., June 1, 1961 in the present case and not of the situation before migration. To the extent the characteristics of the population change during the migration period, the migration data are distorted leading sometimes to serious misleading information. To illustrate this point the data on marital status are examined.

Marriage normally involves a change of residence. It may be assumed, therefore, that all those who were married during the five-year period 1956-61 did change their residence and as such can be regarded as single persons before June 1, 1956. New estimates of single and married migrants can be approximated on the basis of this assumption (Table 2).

TABLE 2. Percentage of Migrant Population by Marital Status: Canada, Quebec and Ontario, 1961

Marital status	Canada		Quebec		Ontario	
	I	II	I	II	I	II
Single	21.0	46.1	24.3	49.3	19.1	42.9
Married	73.6	48.5	70.9	45.8	75.4	51.6
Widowed and divorced ..	5.4	5.4	4.8	4.8	5.5	5.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

I Percentage calculated from migration tabulations.

II New percentage estimated by the addition of the married population between 1/6/56 to 1/6/61 to the single migrant group. See text for further explanation.

Source: Same as Table 1.

The single migrants as shown in Col. II of Table 2 were obtained by adding the persons who were married between June 1, 1956 and June 1, 1961 (marital status distribution from vital statistics) to the single migrant population according to the 1961 Census. The new estimates of married migrant population were obtained by subtracting the persons who have married between 1956 and 1961 from the number of married migrant population reported in the census.

The new estimates presented in Table 2 are certainly over-estimates, but nonetheless, closer to reality than provided by the sample data on migration. This is because all those who have married during the five-year period did not move and did not necessarily remain in Quebec, Ontario or Canada. Some of these marriages constituted remarriages in which, very often, only one person changed residence. Furthermore, among those who have married between 1956 and 1961, some may have become widowed or divorced. However, the data presented in Table 2 indicate the problems in interpreting the data on the marital status distribution of migrants obtained from census data.

There are also problems in interpreting the data on intermunicipal migration streams. At first glance, it would appear that such data as tabulated would enable us to examine each of the intergroup and intragroup migration streams, that is, moves between municipalities of different size groups and moves from one municipality to another within each size group (Table 3).

TABLE 3. Percentage Distribution of the Intermunicipal Migrants Aged 5 Years and Over in 1961, by their Place of Origin in 1956 and Place of Destination, 1961, Quebec

Residence in 1961	Residence in 1956						
	Total	100,000 and over	30,000-99,999	10,000-29,999	Under 10,000	Rural non-farm	Rural farm
100,000 and over ...	100.0	72.1	6.0	3.4	9.2	3.0	6.4
30,000-99,999	100.0	17.8	25.5	10.0	18.4	11.1	17.2
10,000-29,999	100.0	17.9	6.7	18.4	24.9	12.4	19.7
Under 10,000	100.0	22.6	7.3	7.5	25.6	15.3	21.7
Rural non-farm	100.0	30.7	10.5	8.0	19.3	11.0	20.6
Rural farm	100.0	18.2	8.3	6.8	20.1	34.2	12.4

Source: Same as Table 1.

The data presented in Table 3 show that over 70 per cent of the in-migrants to the 100,000 and over urban size group in 1961 resided in another municipality of the same size group in 1956. Is this true for Quebec? Montreal and Quebec are the only two municipalities in Quebec each with population over 100,000. Is it true that 240,900 persons 5 years and over moved between the two municipalities? There seems to be some inconsistency which needs explanation.

The apparent inconsistency stems from the fact that while coding the data by size of the cities and municipalities according to the six size-groups, a move between two municipalities in the same urban area or municipal zone was taken as migration between two municipalities of the group considered. For example, a move from Lachine to Ville d'Anjou becomes a migration between two municipalities of the 100,000 and over size group and not a migration within an urban centre of 100,000 and over, or a migration between one of the 30,000-99,999 size group and another of the under 10,000.

The 72 per cent mobility between urban size groups of 100,000 population and over noted in Table 3 may be attributed to the large number of moves between municipalities of the metropolitan areas of Montreal and Quebec.

Actually, this percentage encompasses a double movement which we are unable to estimate: a local movement between suburban municipalities, from a suburb to the city itself or vice versa, and a long-distance movement, for example, between Montreal and Quebec.

The problem arises for each of the other urban size groups as well. For example, a move from the small municipality of St-Michel-des-Forges to Trois-Rivières is considered to be a migration from 30,000-99,999 urban size group to another of the same size. Because such movements are fewer than the former case, they are less important for the analysis in the present study.

Thus, the 1961 Census data on migration streams, as tabulated, represent both types of movements, local and long-distance, which complicate the analysis of migration streams. In order to take care of this problem and be able to examine more clearly the number of in-migrants and out-migrants for each of the size groups, it was decided not to take into account inter-municipal migration within the same group. Hence, in the analysis of migration streams, only those moves from one urban size group to another are considered.

3. Intraprovincial Migration Differentials

The aim of this section is to examine the intraprovincial migrants in the two provinces in terms of the differences in the demographic characteristics between several types of migrants such as rural to urban and interurban by size groups. As Bogue and Shryock state, "just as migration streams can cause a given community to grow or decline in size, so differential migration can cause it to change its population composition" (Bogue, Shryock and Hoermann, 1957, p. 7).

The examination of migration differentials between Quebec and Ontario may be undertaken in the light of some of the prominent features of population distribution in the two provinces. As Louis Trottier observed:

Compared to Ontario, the evolution of urban population in Quebec presents few original characteristics. One notes only a somewhat lesser concentration of population in the cities, a certain time lag and particularly a relatively greater concentration in the major city (Trottier, 1968, p. 23).

In 1961, the small number of medium-size towns and their small populations characterized the urban population pattern in Quebec. The two urban centres, Montreal and Quebec cities, accounted for close to 60 per cent of the urban population of Quebec. Thus, the province of Quebec differs from Ontario not so much by its urbanization rate but by the extreme concentration of the urban population in the two centres, and especially in one immense city (Trottier, 1968, pp. 27 and 28). In 1961, while the population of metropolitan Montreal

was 54 per cent of the urban population in Quebec, the proportion of Toronto's population to the total urban population of Ontario was only 38 per cent.

3.1 Age and Sex Differentials

In 1961 intraprovincial migrants (i.e., migration within the province alone) represented 91 per cent of total migrants for Quebec and 83 per cent of the total migrants for Ontario. In both provinces, migrants from the urban areas represented more than 40 per cent of the total urban population, whereas in the rural-farm areas they comprised little over 10 per cent of the rural farm population (Table 4).

TABLE 4. Percentage of Intraprovincial Migrants for Each Area Type in 1961, Quebec and Ontario

Sex	Quebec				Ontario			
	Total	Urban	Rural non-farm	Rural farm	Total	Urban	Rural non-farm	Rural farm
Male	41.3	47.5	32.8	10.3	40.1	42.9	40.0	16.4
Female	42.4	47.3	34.0	11.8	39.9	42.0	39.7	17.7
Total	41.8	47.4	33.0	10.9	40.0	42.5	39.9	17.0

Source: Same as Table 1.

In both provinces, the sex ratios of the total population ($\frac{M}{F}$) were more or less similar in 1961 irrespective of the type of area considered. This pattern did not hold good for the migrants. Compared to women, men migrated more in Ontario than in Quebec, particularly in rural areas (Table 5).

TABLE 5. Sex Ratio of the Migrant Population of Quebec and Ontario, 1961

Place of residence/1961	Sex ratio $\frac{M}{F} \times 100$		Index (100 = Quebec)	
	Quebec	Ontario	Quebec	Ontario
Total	96	99	100	103
Urban	95	97	100	102
Rural non-farm	102	106	100	104
Rural farm	105	113	100	108

Source: Same as Table 1.

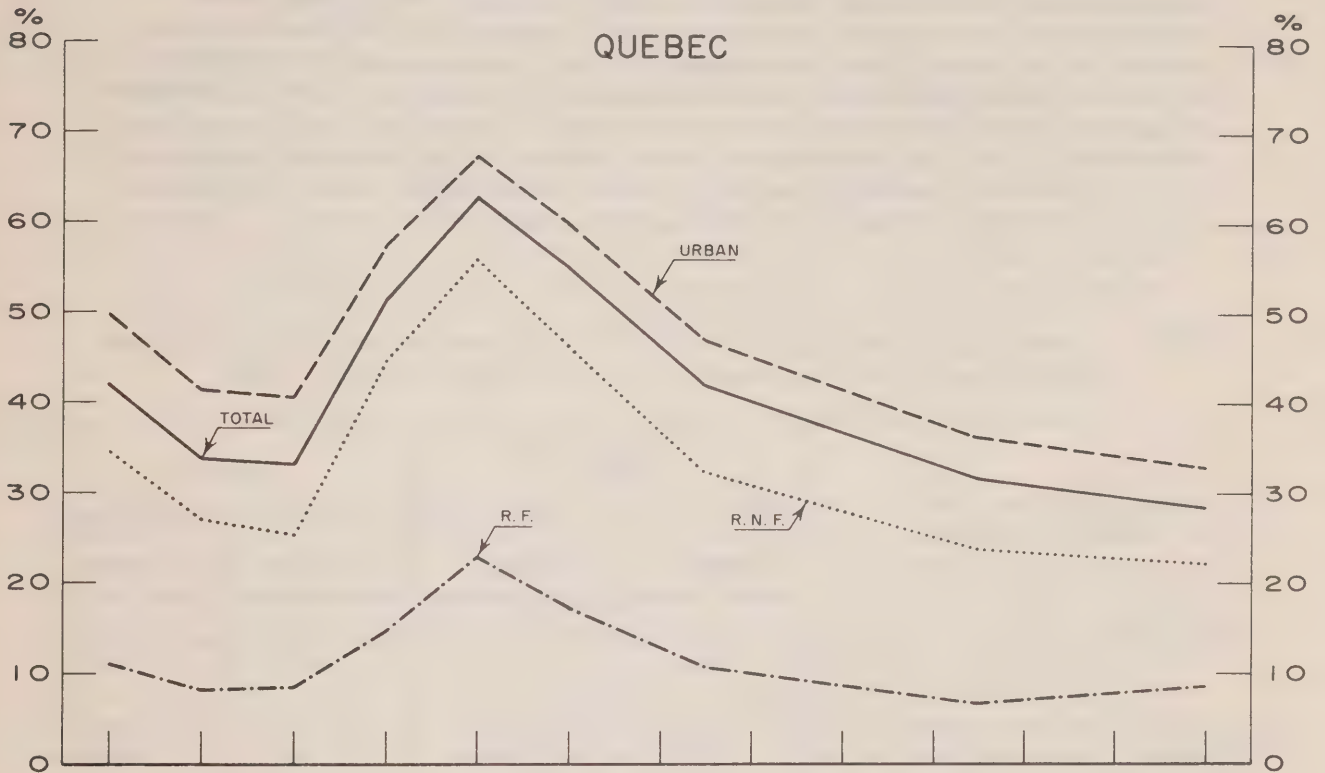
The age distribution shows that there was little variation in the age structure of the migrants in the two provinces. However, there was a higher proportion in the 20-39 age group among migrants to the rural farm areas of Ontario than the corresponding group for Quebec (Graph 1).

A comparison of the age distribution of migrants with that of the total population showed that the pattern was similar to the rather universal pattern with an excess of adolescents and young adults among migrants. Such a pattern was observed in the case of all types of intraprovincial migrants. It should be noted that the ages of migrants available for comparison refer to the ages attained at the end of the migration interval and not to the ages at the time of migration.

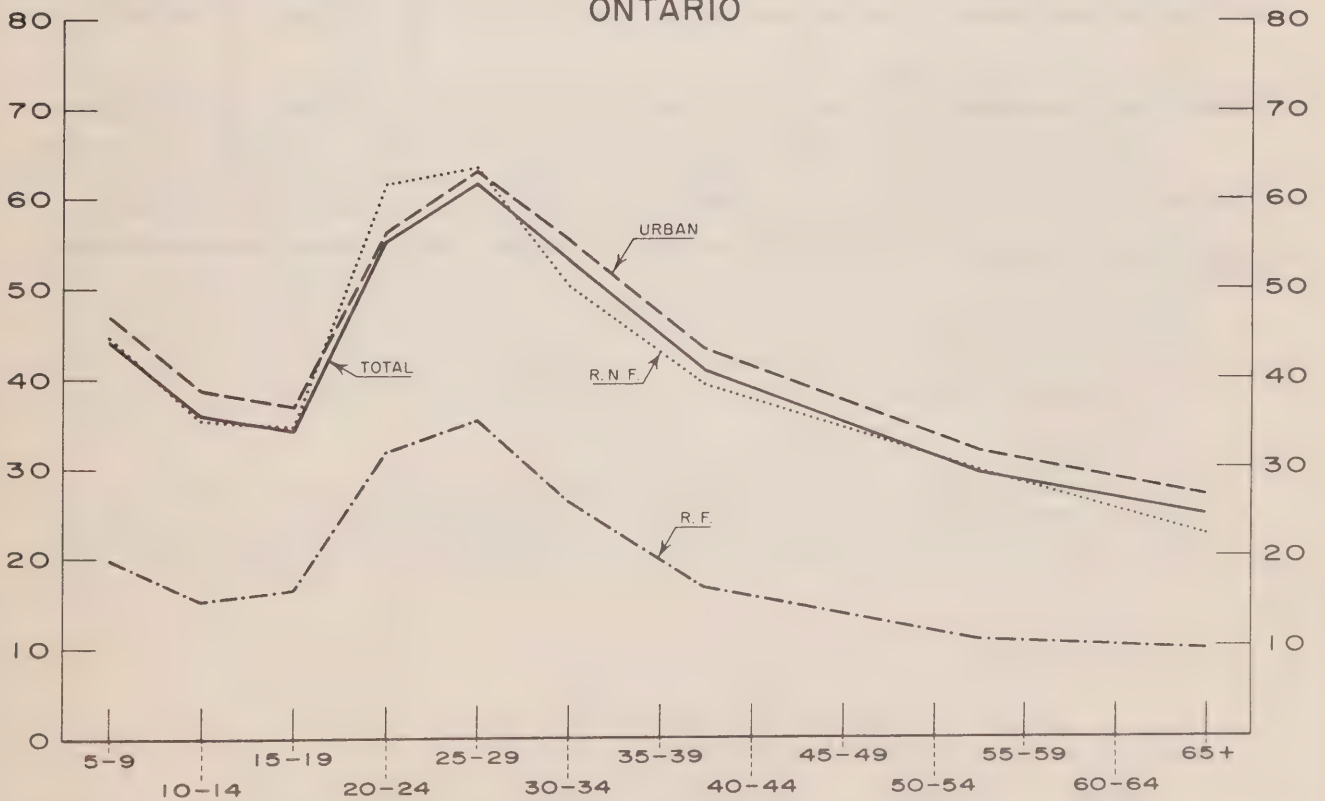
GRAPH I

INTRAPROVINCIAL MIGRATION RATES, BY AGE AND RESIDENCE,
QUEBEC AND ONTARIO, 1961
(RATE PER 100 POPULATION AT END OF PERIOD)

QUEBEC



ONTARIO



SOURCE: UNPUBLISHED MIGRATION TABULATIONS, 1961 CENSUS.

3.2 Marital Status of Intraprovincial Migrants

Data on intraprovincial migration showed that one third of the single population of Ontario and Quebec in 1961 no longer inhabited the dwelling they occupied 5 years earlier. These single migrants represented 24 per cent (326,000 persons) of the total number of migrants in Quebec and 18 per cent (295,000 persons) in Ontario. The predominant group was married persons who accounted for 71 per cent and 76 per cent, respectively, of the migrants of each province. In both the provinces the proportions of married among migrants were higher than the proportions of married in the total population (Table 6).

TABLE 6. Percentage Distribution of the Total Population and the Migrant Population, by Marital Status for Quebec and Ontario, 1961

Marital status	Quebec		Ontario	
	Total population	Migrant population	Total population	Migrant population
Single	32.0	24.3	22.0	18.0
Married	62.2	70.8	71.2	76.0
Widowed and divorced	5.8	4.9	6.8	6.0
Total	100.0	100.0	100.0	100.0

Source: Same as Table 1.

Thus, whatever their place of residence in 1961, the proportion of married persons who changed their dwellings during the preceding five-year period was consistently higher than that of single persons. As stated earlier, the marital status distributions given here refer to the 1961 Census data and not to the marital status at the time of migration. Hence, it would be difficult to generalize from these data regarding the relative propensity among the three marital status groups to migrate. A knowledge of the marital status at the time of the move, instead of June 1, 1961, might have yielded different results. However, since most of the adult population, i.e., the most mobile age group, is married, and married couples move together, it is reasonable to find a higher proportion of married among movers (see George, 1970, p. 175 and Taeuber, et al., 1968, p. 65).

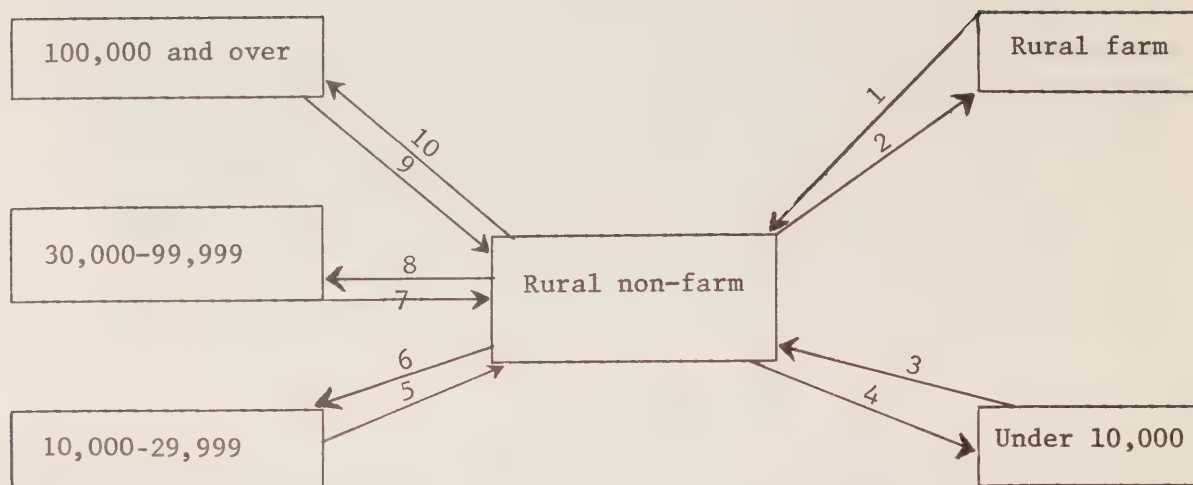
4. Migration Streams

For practical reasons, the analysis here is confined to intermunicipal migration streams by urban size groups and type of area, i.e., rural farm and rural non-farm. As defined by Bogue, Shryock and Hoermann, "a migration stream is that body of migrants which departs from any one area of origin (or type of area of origin) for any area of destination (or type of area of destination) during a migration interval" (1957, p. 5). The same definition is used here for stream analysis. For both the provinces intermunicipal migration was over 30 per cent of the total intraprovincial migration (including intramunicipal movement). In Quebec, between 1956 and 1961, about 584,000 persons 5 years and over moved from one municipality to another, or about 13 per cent of the total population 5 years and over. In Ontario the corresponding number was 747,700 which constituted 14 per cent of the population 5 years and over.

A detailed stream analysis requires tabulation of migration data for each municipality. Such a tabulation would make it possible to examine the volume and characteristics of migrants from each municipality to another during the migration period. Thus, for example, it would be possible to identify the various origins and destinations in the province of Quebec of in-migrants and out-migrants from Montreal metropolitan region. Although migration data were collected for each city, town, village or municipality, only moves between defined area types were tabulated. Thus, the data available are not satisfactory for a detailed and more meaningful analysis of migration streams than attempted here. Because of this limitation, the results of the analysis here will be less useful for regional planning purposes.

The data were compiled for four urban size groups, rural farm area and rural non-farm area. Taking into account both the in- and out-migration for each area, there are ten (10) migration streams (five in-migration and five out-migration) as shown below.

Migration streams for one area type



Thus, for each province, there are 60 streams to be considered. In this section, each of these streams and the resultant net migration will be analysed. Only data on persons aged 15 years and over are used. There will be no discussion of streams for males and females separately. The results for each province are compared with each other. Areas where net-migration is negative, i.e., losing areas, are considered first for discussion.

4.1 Rural farm Areas

In Quebec and in Ontario, as in other countries, there has long been a tendency to move from the farm to the city. During the 1956-61 period, this movement continued. The net loss of farm population to other area types was 36,200 in Quebec and 30,800 in Ontario, or a net migration rate of - 114 and - 92.7 per 1,000 population, respectively. This means that during those five years, about 1 out of 10 left their farms in both the provinces. In absolute numbers as well as relative numbers, this loss represents the largest among the areas considered (Table 7).

The amount of migration loss observed, is a result of a very low volume of in-migration, especially for Quebec, and a high volume of out-migration from rural farm areas.

The in- and out-migration streams identifying the origins and destinations of each stream for rural farm areas are presented in Graph 2.

TABLE 7. Number of Migrants and Migration Rate for Each Migration Stream:
Rural farm Area Type, Quebec and Ontario, 1956-1961
(Rate per 1,000 sample population in 1961)

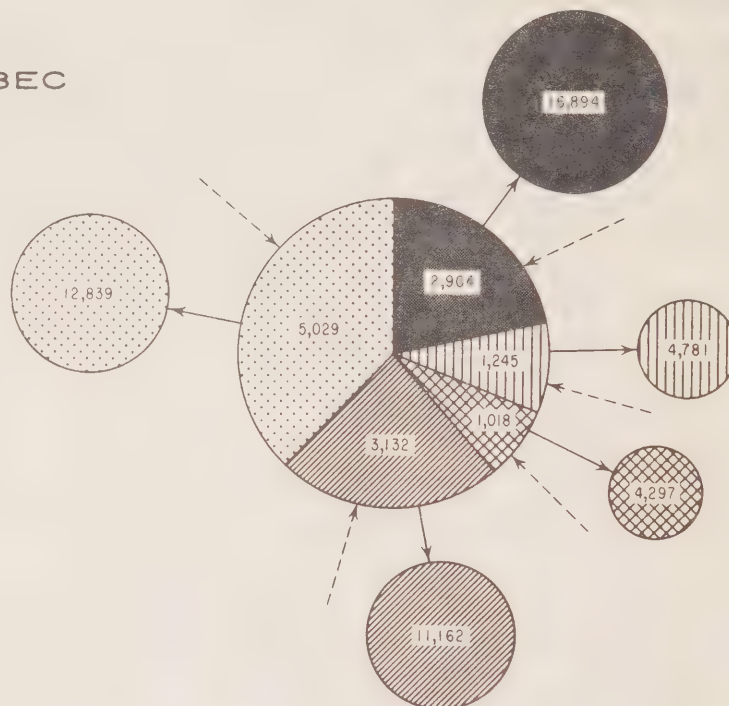
Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
100,000 and over	2,904	16,894	- 13,990	9.0	52.5	- 43.5
30,000-99,999 ..	1,245	4,781	- 3,536	3.9	14.9	- 11.0
10,000-29,999 ..	1,018	4,297	- 3,279	3.2	13.4	- 10.2
Under 10,000 ...	3,132	11,162	- 8,030	9.7	34.7	- 25.0
Rural non-farm	5,029	12,839	- 7,810	15.6	39.9	- 24.3
Total	13,318	49,586(1)	- 36,266(1)	41.3	155.4	- 114.0(1)
Ontario						
100,000 and over	8,262	13,971	- 5,709	24.9	42.0	- 17.0
30,000-99,999 ..	2,699	9,036	- 6,337	8.1	27.2	- 19.1
10,000-29,999 ..	2,565	3,818	- 1,253	7.7	11.5	- 3.8
Under 10,000 ...	6,335	12,443	- 6,108	19.1	37.4	- 18.4
Rural non-farm	10,548	22,079	- 11,531	31.7	66.4	- 34.7
Total	30,409	61,241(1)	- 30,832(1)	91.5	184.2	- 92.7(1)

(1) Due to pro rata distribution of "Not stated" categories, totals differ slightly.

Source: Same as Table 1.

OUT-MIGRANTS AND IN-MIGRANTS OF THE RURAL FARM AREA TYPE BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



LEGEND

AREA TYPE / URBAN CENTRES
IN THOUSANDS

100+

30-99

10-29

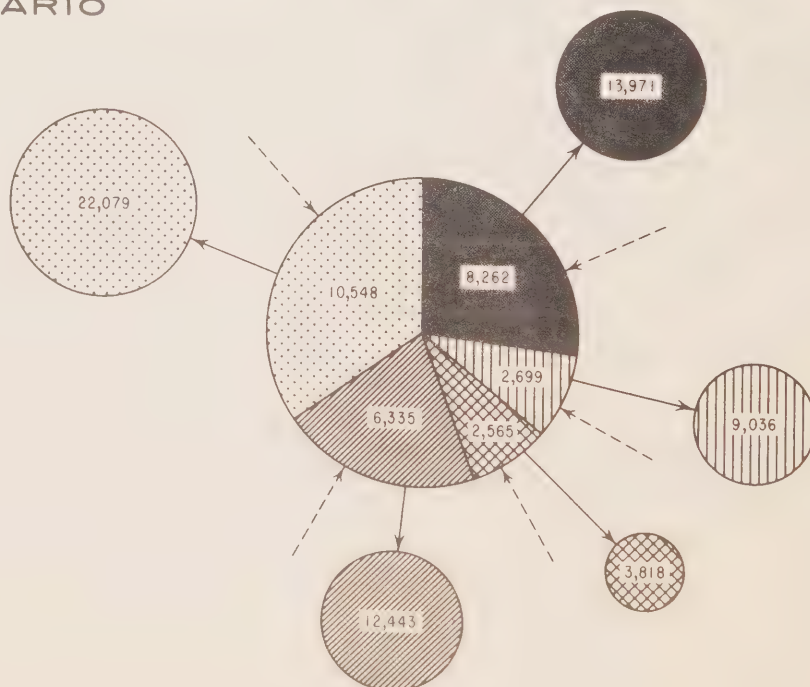
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R. N. F.

OUT-MIGRATION

IN-MIGRATION

ONTARIO



In both the provinces, all migration streams between rural farm areas and all other five areas resulted in a net migration loss. In Ontario, the highest loss occurred as a result of the exchange of population with the rural non-farm areas and in Quebec the highest loss was between urban areas with 100,000 and over population.

Where did the in-migrants to rural farm areas live in 1956? In both the provinces more than a third of rural farm migrants were living in rural non-farm areas in 1956. Approximately 22 to 27 per cent inhabited in large urban centres and about 21 to 23 per cent came from small urban centres with a population of less than 10,000 (Table 8). Part of this movement to rural farm areas may be attributed to return migration. Other data are required to find the reason for the migration to rural farm areas. The tendency to live in a farm close to an urban centre and commute to work in the town may be able to explain the movement to farms.

TABLE 8. Percentage of Out-migrants and In-migrants of the Rural farm Area Type, According to their Place of Destination or Place of Origin, Quebec and Ontario

	100,000 and over	30,000- 99,999	10,000- 29,999	Under 10,000	Rural non-farm	Total
<u>Quebec</u>						
Out-migrants	34.2	9.6	8.8	22.5	25.9	100.0
In-migrants	21.8	9.3	7.6	23.5	37.8	100.0
<u>Ontario</u>						
Out-migrants	22.8	14.8	6.2	20.3	36.1	100.0
In-migrants	27.2	8.9	8.4	20.8	34.7	100.0

Source: Same as Table 1.

Where did the rural farm out-migrants go? Did they move to the towns or cities of Quebec and Ontario? In Quebec 34 per cent of the out-migrants moved to centres with more than 100,000 inhabitants (Table 8). Thus, a major part of the movement was made directly, from the agricultural holding to the big city. The great attraction of Montreal explains this movement. To these out-migrants must be added a good part of those who migrated to the rural non-farm areas, i.e. 25 per cent of the out-migration total. In fact, this type is very heterogeneous; it includes areas away from the cities, as well as those near but not incorporated in urban municipalities. The former are very much isolated while the latter are more or less the same as the big city "rings". Finally, 22 per cent of the out-migrants moved to small urban centres. These small centres thus play the role of "relay towns".

In Ontario the largest outflow was towards the rural non-farm areas followed by big urban centres. Thirty-six per cent of out-migrants went to the rural non-farm areas and 23 per cent went to big cities (Table 8). Thus, the out-migrants left the farm areas primarily to go to the larger urban centres or their urbanized fringe, represented here by the rural non-farm areas.

4.2 Under 10,000 Urban Size Group

In addition to the rural-urban movement, there was the tendency to migrate from small urban areas to large urban centres. Between 1956 and 1961 49,500 out-migrants from areas with less than 10,000 inhabitants left for other area types in Quebec. The corresponding amount for Ontario was 71,700. On the other hand, the number of in-migrants from other areas was 38,700 in Quebec and 58,800 in Ontario. This resulted in an out-migration rate of - 177 for Ontario and of - 141 for Québec per 1,000 population.

TABLE 9. Number of Migrants and Migration Rate for Each Migration Stream:
Under 10,000 Urban Size Group, Quebec and Ontario, 1956-1961
(Rate per 1,000 sample population in 1961)

Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
100,000 and over	11,798	24,054	- 12,256	33.6	68.5	- 34.9
30,000-99,999 ..	3,323	5,418	- 2,095	9.5	15.4	- 6.0
10,000-29,999 ..	3,910	5,504	- 1,594	11.1	15.7	- 4.5
Rural non-farm	8,517	11,372	- 2,855	24.2	32.4	- 8.1
Rural farm	11,169	3,132	8,037	31.8	8.9	22.9
Total	38,717	49,480	- 10,763(1)	110.2	140.8	- 30.6
Ontario						
100,000 and over	22,632	23,677	- 1,045	56.0	58.6	- 2.6
30,000-99,999 ..	6,921	13,092	- 6,171	17.1	32.4	- 15.3
10,000-29,999 ..	5,937	6,109	- 172	14.7	15.1	- 0.4
Rural non-farm	10,846	22,515	- 11,669	26.8	55.7	- 28.9
Rural farm	12,443	6,335	6,108	30.8	15.7	15.1
Total	58,779	71,728	- 12,949(1)	145.4	177.4	- 32.0

(1) Due to pro rata distribution of "Not Stated" categories, totals differ slightly.
Source: Same as Table 1.

In Quebec, approximately one third of the in-migrants are from rural farms, another third from the big cities and the remaining from either the rural non-farm areas or medium-size urban centres (Graph 3).

The first case seems to be a matter of migration to the small municipalities located near farming districts, and the second, migration to an area situated near a large urban centre and representing, to a certain extent, the "ring".

In Ontario about 38 per cent of the in-migrants came from localities with population 100,000 and over and 21 per cent came from rural farm areas. The pattern of the in-migration streams shows that the traditional pattern of moving from a farm area to a small town is more conspicuous in Quebec than in Ontario. The exchange of population with farm areas resulted in a net gain of 6,000 persons for Ontario and 8,000 persons for Quebec.

Where did the out-migrants go? In Quebec about 48 per cent of them went to cities of 100,000 and over population, while 23 per cent moved to rural non-farm areas (Table 10).

TABLE 10. Percentage of Out-migrants and In-migrants of the Under 10,000 Size Group,
According to their Place of Destination or Place of Origin,
Quebec and Ontario

	100,000 and over	30,000- 99,999	10,000- 29,999	Rural non-farm	Rural farm	Total
<u>Quebec</u>						
Out-migrants	48.6	10.9	11.2	23.0	6.3	100.0
In-migrants	30.5	8.6	10.1	22.0	28.8	100.0
<u>Ontario</u>						
Out-migrants	33.0	18.3	8.5	31.4	8.8	100.0
In-migrants	38.5	11.8	10.0	18.5	21.2	100.0

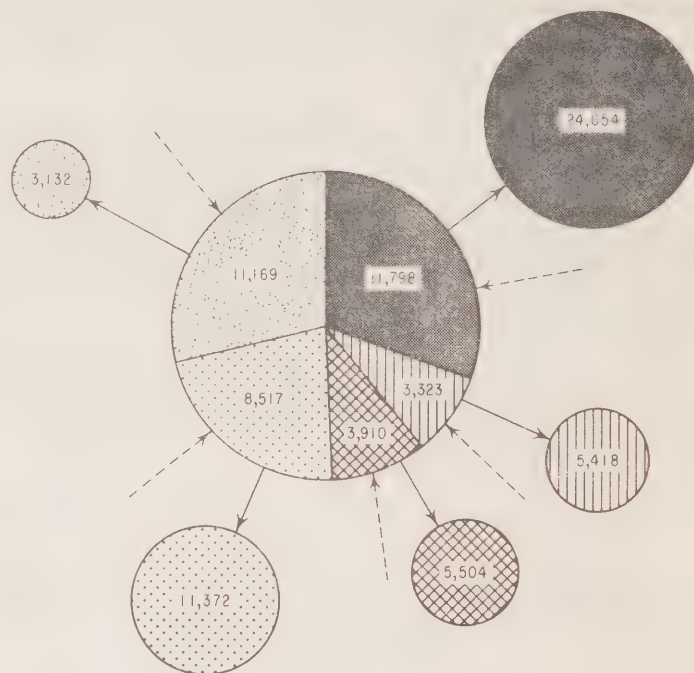
Source: Same as Table 1.

In Ontario, only 33 per cent went to big cities and 31 per cent went to rural non-farm areas. Thus, a higher proportion of out-migrants from small towns went to rural non-farm areas in Ontario than in Quebec. Table 10 presents the data on the extent of in- and out-migration streams for the two provinces.

In the exchange of migration between urban areas with under 10,000 population and other areas, there was a gain only from rural farm areas in both the provinces. The gain amounted to a net migration rate of 23 for Quebec and 15 for Ontario per 1,000 population. Other migration streams resulted in a net loss.

OUT-MIGRANTS AND IN-MIGRANTS OF THE UNDER 10,000 URBAN SIZE GROUP BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



LEGEND

AREA TYPE / URBAN CENTRES
IN THOUSANDS

100+

30-99

10-29

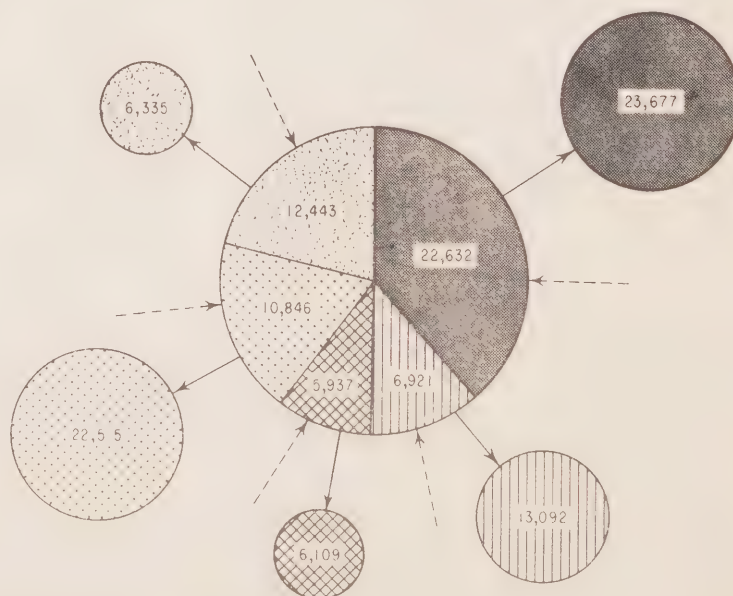
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R.F.

OUT-MIGRATION

IN-MIGRATION

ONTARIO



4.3 10,000 to 29,999 Urban Size Group

As in the rural farm and under 10,000 urban size groups, this group also had a net loss of migration to all other areas combined in both the provinces. The net loss was higher for Ontario than for Quebec in terms of both the volume and rate. The net migration rate was - 19 for Quebec and - 84 for Ontario per 1,000 population (Table 11).

TABLE 11. Number of Migrants and Migration Rate for Each Migration Stream:
10,000 to 29,999 Urban Size Group, Quebec and Ontario, 1956-1961

(Rate per 1,000 sample population in 1961)

Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
100,000 and over	3,878	9,114	- 5,236	23.8	55.8	- 32.0
30,000-99,999 ..	1,552	2,850	- 1,298	2.5	17.5	- 8.0
Under 10,000 ...	5,504	3,910	1,594	33.7	24.0	9.7
Rural non-farm	3,019	4,509	- 1,490	18.5	27.6	- 9.1
Rural farm	4,299	1,018	3,281	26.3	6.2	20.1
Total	18,252	21,401	- 3,149(1)	111.8	131.1	- 19.3
Ontario						
100,000 and over	9,810	14,409	- 4,599	50.6	74.3	- 23.7
30,000-99,999 ..	2,703	5,755	- 3,052	13.9	29.7	- 15.7
Under 10,000 ...	6,109	5,937	172	31.5	30.6	0.9
Rural non-farm	3,438	13,431	- 9,993	17.7	69.3	- 51.5
Rural farm	3,818	2,565	1,253	19.7	13.2	6.5
Total	25,878	42,097	- 16,219	133.5	217.1	- 83.6

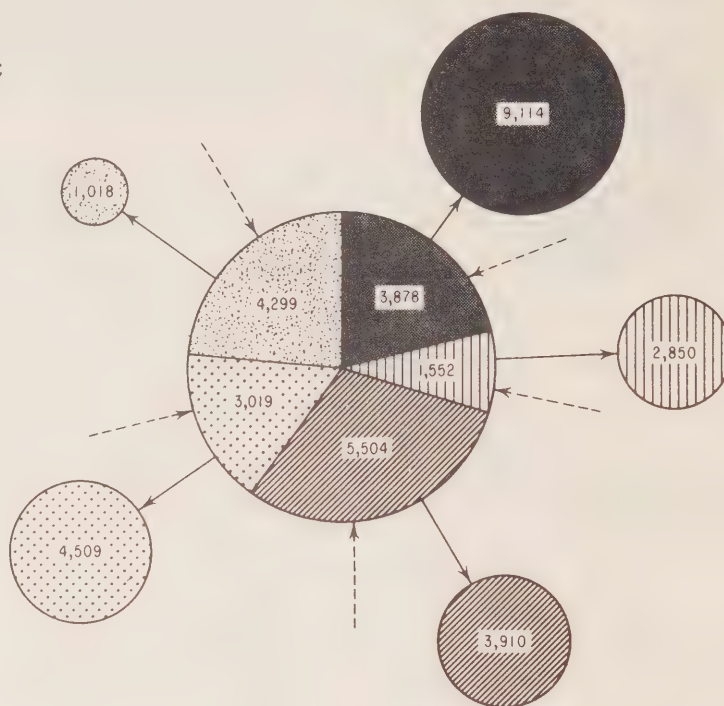
(1) Due to pro rata distribution of "Not Stated" categories, totals differ slightly.

Source: Same as Table 1.

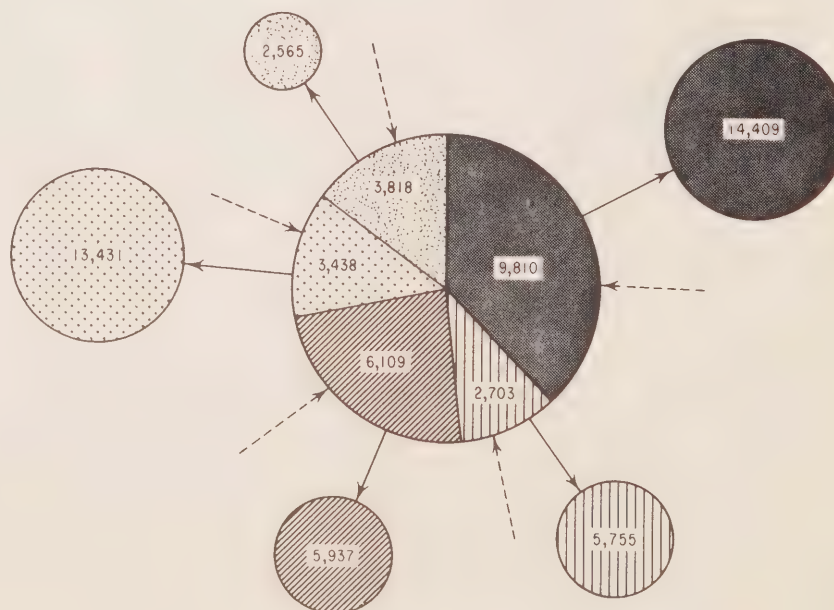
The explanation for the great difference in the amount of net migration between the two provinces may be found in the volume of in- and out-migration streams. The rates of in-migration were not much different for the two provinces; 112 for Quebec and 134 for Ontario per 1,000 population. However, there was great difference in the out-migration rates. While the out-migration rate was 131 for Quebec, it was 217 for Ontario. Although the in- and out-migration rates were high, the total number of migrants for this urban group was the lowest for both the provinces (Graph 4).

OUT-MIGRANTS AND IN-MIGRANTS OF THE 10,000-29,999 URBAN SIZE GROUP BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



ONTARIO



The low volume of migration is not an indication of low mobility of population in this group, but due to small size of population in the group.

Table 11 and Graph 4 illustrate the population exchange for the 10,000-29,999 urban size group. On the one hand, this group attracted migrants from the farm environment and from centres with less than 10,000 residents; on the other hand, a large number of its people migrated to large and high medium-size urban centres and rural non-farm areas. As a result this urban group had a net migration gain in the former case and a net migration loss in the latter case in both the provinces (Table 11).

Where were the in-migrants living in 1956? In Quebec more than 50 per cent, i.e. 9,800 persons, were living either in a farm environment or in an urban area of less than 10,000; 21 per cent lived in large cities. Here the incidence of "relay towns" seems to have been significant since, on the one hand, over 50 per cent of the in-migrants are from a smaller area type, while on the other one, 56 per cent of the out-migrants moved to a larger city. In Ontario, over 60 per cent of in-migrants came from large urban centres and cities of under 10,000 population, the rest came from other areas (Table 12).

TABLE 12. Percentage of the Out-migrants and In-migrants of the 10,000 to 29,999 Urban Size Group, According to their Place of Destination or Place of Origin, Quebec and Ontario

	100,000 and over	30,000- 99,999	Under 10,000	Rural non-farm	Rural farm	Total
<u>Quebec</u>						
Out-migrants	42.5	13.3	18.3	21.0	4.8	100.0
In-migrants	21.2	8.5	30.2	16.5	23.6	100.0
<u>Ontario</u>						
Out-migrants	34.2	13.7	14.1	31.9	6.1	100.0
In-migrants	37.9	10.4	23.6	13.3	14.8	100.0

Source: Same as Table 1.

The out-migration streams show that in Quebec over 50 per cent of the out-migrants of this group moved to larger urban centres: 42 per cent to large cities and 13 per cent to centres in the 30,000-99,999 urban size group (Table 12). The large urban centres and their "ring", representing the rural non-farm areas, attracted over 60 per cent of the out-migrants. In Ontario, over 66 per cent of migrants moved to large urban centres and rural non-farm areas.

4.4 30,000 to 99,999 Urban Size Group

The level and pattern of migration streams for this group exhibit more differences between Quebec and Ontario than other groups. While the net migration for this group was a loss for Quebec, it was a gain for Ontario. Also, the total volume of migration (in- and out-migration together) in Ontario was almost double that of Quebec; 100,000 for Ontario and 49,000 for Quebec. In explaining the differences in the stream pattern of the two provinces, it is necessary to know the differences in the size of total population of the two provincial groups and the relevant socio-economic factors. The population size of this group for Ontario was 700,000, but in Quebec the corresponding size was only 380,000. Furthermore, the cities of this group in Ontario are more industrialized than their counterparts in Quebec.

For Quebec the net loss of migration in this group occurred mainly as a result of the exchange of migration with the large urban areas (100,000 and over) and rural non-farm areas. For Ontario the net loss was only with rural non-farm areas (Table 13).

TABLE 13. Number of Migrants and Migration Rate for Each Migration Stream:
30,000 to 99,999 Urban Size Group, Quebec and Ontario, 1956-1961

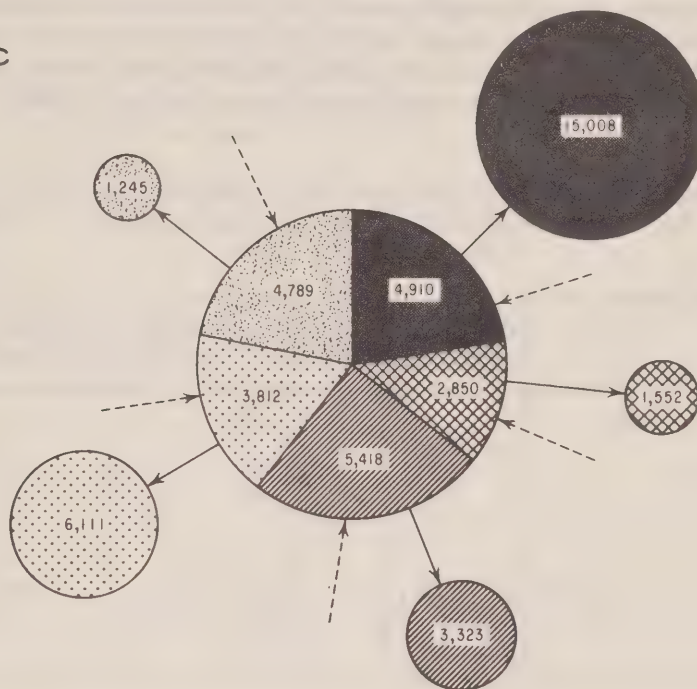
(Rate per 1,000 sample population in 1961)

Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
100,000 and over	4,910	15,008	- 10,098	21.1	64.5	- 43.4
10,000-29,999 ..	2,850	1,552	1,298	12.3	6.7	5.6
Under 10,000 ...	5,418	3,323	2,095	23.3	14.3	9.0
Rural non-farm	3,812	6,111	- 2,299	16.4	26.3	- 9.9
Rural farm	4,789	1,245	3,544	20.6	5.4	15.2
Total	21,779	27,239	- 5,460	93.6	117.1	- 23.5
Ontario						
100,000 and over	22,449	19,624	2,850	37.7	33.0	4.7
10,000-29,999 ..	5,755	2,703	3,052	9.7	4.5	5.1
Under 10,000 ...	13,092	6,921	6,171	22.0	11.6	10.4
Rural non-farm	5,209	12,594	- 7,385	8.7	21.2	- 12.4
Rural farm	9,036	2,699	6,337	15.2	4.5	10.6
Total	55,541	44,541	11,000(1)	93.3	74.8	18.5

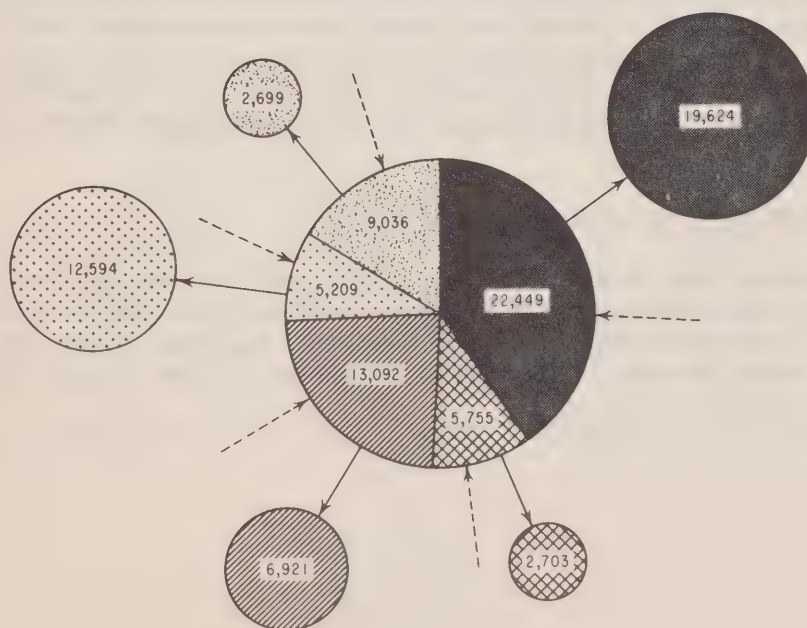
(1) Due to pro rata distribution of "Not stated" categories, totals differ slightly.
Source: Same as Table 1.

OUT-MIGRANTS AND IN-MIGRANTS OF THE 30,000-99,999 URBAN SIZE GROUP BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



ONTARIO



The in- and out-migration streams are illustrated in Graph 5. In Quebec the in-migrants in this group originated mainly from three area types: urban areas with less than 10,000 people, very large urban centres, and farm areas. Altogether, these represented approximately 70 per cent of the in-migrants in the group. This was not the case with the same size group in Ontario where over 40 per cent of the in-migrants were living in the 100,000 and over size group; and another 24 per cent came from small centres of under 10,000 inhabitants (Table 14).

TABLE 14. Percentage of the Out-migrants and In-migrants of the 30,000 to 99,999 Urban Size Group, According to their Place of Destination or Place of Origin, Quebec and Ontario

	100,000 and over	10,000- 29,999	Under 10,000	Rural non-farm	Rural farm	Total
<u>Quebec</u>						
Out-migrants	55.1	5.7	12.2	22.4	4.5	100.0
In-migrants	22.5	13.1	24.9	17.5	22.0	100.0
<u>Ontario</u>						
Out-migrants	44.1	6.1	15.5	28.3	6.1	100.0
In-migrants	40.4	10.4	23.6	9.4	16.2	100.0

Source: Same as Table 1.

Of the out-migrants from Quebec, over 77 per cent of them moved either to large cities (55 per cent), or to rural non-farm municipalities (22.4 per cent). Thus, the large cities exercised considerable force of attraction over the residents of this group (see section 5 for details of this measure). As in Quebec, most of the out-migrants in Ontario also moved to larger urban centres and rural non-farm areas (Table 14).

4.5 100,000 and Over Urban Size Group

In Quebec, the Montreal metropolitan area is the most significant one in this group because of its size and socio-economic importance. In 1961, the total population of Montreal was over 2,100,000, while the two other regions in this group, Quebec and the "great urban centre"

of Chicoutimi - Jonquière, had only a population of 357,500 and 105,000, respectively.(1) Thus, the migration streams between this group and the other five had been considerably, if not essentially, influenced by the Montreal metropolitan area. On the other hand, in Ontario, Toronto's domination was greatly reduced by the presence of some half a dozen urban or metropolitan regions. The attraction of Montreal for migration can be further seen from the net migration for this group for the two provinces. While Quebec had a net gain of 31,500 persons, Ontario had a net loss of 25,100 persons (Table 15).

(1) See: 1961 Census of Canada, Bulletin 1.1-6, Tables 10 and 11.
Total population including children under 15.

TABLE 15. Number of Migrants and Migration Rate for Each Migration Stream:
100,000 and Over Urban Size Group, Quebec and Ontario, 1956-1961

(Rate per 1,000 sample population in 1961)

Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
30,000-99,999 ..	15,008	4,910	10,098	8.8	2.9	5.9
10,000-29,999 ..	9,114	3,878	5,236	5.4	2.3	3.1
Under 10,000 ...	24,054	11,798	12,256	14.1	6.9	7.2
Rural non-farm	9,248	19,283	- 10,035	5.4	11.3	- 5.9
Rural farm	16,896	2,894	14,002	9.9	1.7	8.2
Total	74,320	42,763	31,557	43.7	25.1	18.6
Ontario						
30,000-99,999 ..	19,624	22,449	- 2,825	9.8	11.2	- 1.4
10,000-29,999 ..	14,409	9,810	4,599	7.2	4.9	2.3
Under 10,000 ...	23,677	22,632	1,045	11.9	11.3	0.5
Rural non-farm	8,057	41,748	- 33,691	4.0	20.9	- 16.9
Rural farm	13,971	8,262	5,709	7.0	4.1	2.9
Total	79,738	104,901	- 25,163(1)	40.4	52.6	- 12.6

(1) Due to pro rata distribution of "Not Stated" categories, totals differ slightly.

Source: Same as Table 1.

The impact of these migration streams on the population of this group for both the provinces is considerably less than on the others. The in-migration rate only amounted to 43 per thousand for Quebec, and 40 per thousand for Ontario, while the out-migration rates were 25 and 53, respectively. In Quebec only the exchange of migration between this group and rural non-farm areas resulted in a negative net migration; the out-migrants to this amounted to 45 per cent of the total out-migrants. This is an indication of high out-migration from big cities to their suburbs. This was true for Ontario also where 40 per cent of the out-migrants moved to rural non-farm areas.

Another important stream for both the provinces was the migration with the urban areas of under 10,000 population. In Quebec, 12,000 persons moved to such areas and 24,000 persons came from such areas. The corresponding numbers for Ontario were 22,600 and 23,700, respectively.

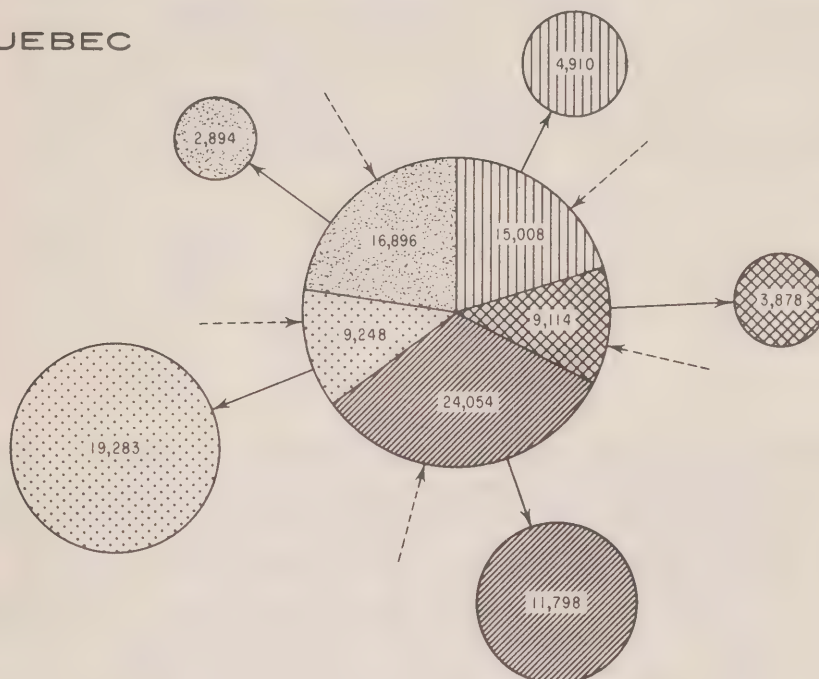
Unlike in Quebec, the net migration for this group in Ontario was a loss of 25,100 persons which may be attributed to the heavy out-migration to rural non-farm areas and areas with population 30,000 to 99,999 (Graph 6).

Migration to or from this group has a much greater impact on the place of origin or destination of the migrants than on the 100,000 and over urban size group itself (Table 15). As for the impact of in-migrants and out-migrants on this population group, the migration rates speak for themselves: the net migration rate was less than 20 per 1,000 population.

The amount of in- and out-migration to or from each of the other areas in both the provinces is presented in Table 16.

OUT-MIGRANTS AND IN-MIGRANTS OF THE 100,000 AND OVER URBAN SIZE GROUP BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



ONTARIO

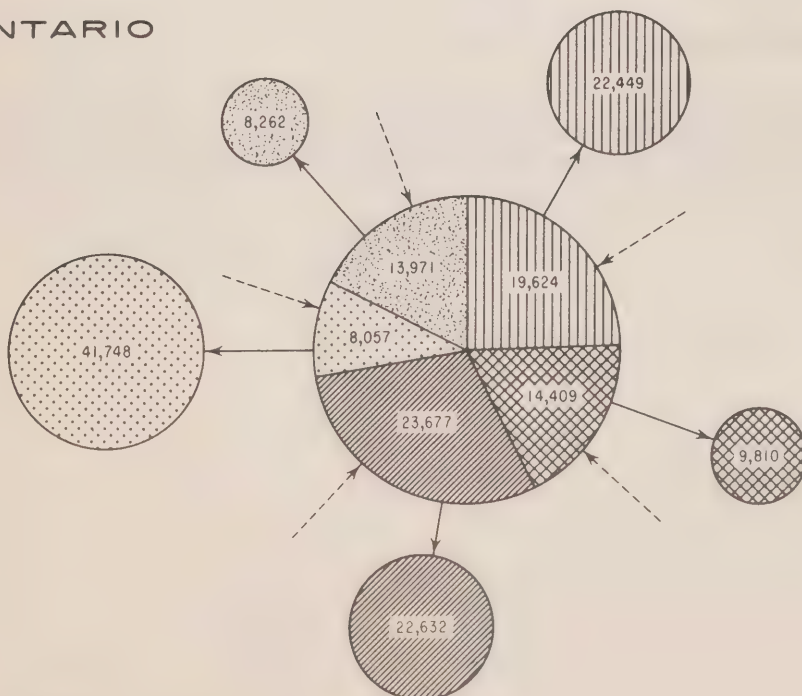


TABLE 16. Percentage of the Out-migrants and In-migrants of the 100,000 and Over Urban Size Group, According to their Place of Destination or Place of Origin, Quebec and Ontario

	30,000- 99,999	10,000- 29,999	Under 10,000	Rural non-farm	Rural farm	Total
<u>Quebec</u>						
Out-migrants	11.5	9.1	27.6	45.1	6.8	100.0
In-migrants	20.2	12.3	32.4	12.4	22.7	100.0
<u>Ontario</u>						
Out-migrants	21.4	9.4	21.6	39.8	7.9	100.0
In-migrants	24.6	18.1	29.7	10.1	17.5	100.0

Source: Same as Table 1.

The predominant out-migration streams in both the provinces were to the rural non-farm areas followed by areas with population under 10,000. For both the provinces, the main stream of in-migration was from areas with less than 10,000 population. In Quebec, it was followed by in-migration streams from areas with less than 10,000 population, followed by rural farm areas and areas with population 30,000 to 99,999. In Ontario, the predominant in-migration streams were from areas with less than 10,000 population followed by high medium-size cities (30,000 to 99,999). Thus, in both the provinces, the big city - small urban centre and vice versa migration stream mobilized the largest number of migrants of all.

4.6 Rural Non-farm Areas

All the migration streams for this group show a positive balance resulting in a net gain of 24,000 for Quebec and 74,000 for Ontario. The net migration rates were 55 for Quebec and 140 for Ontario (Table 17).

TABLE 17. Number of Migrants and Migration Rate for Each Migration Stream:
Rural Non-farm Area Type, Quebec and Ontario, 1956-1961

(Rate per 1,000 sample population in 1961)

Area type	Number of migrants			Migration rate		
	In-migrants	Out-migrants	Net migration	In-migrants	Out-migrants	Net migration
Quebec						
100,000 and over	19,283	9,250	10,033	44.0	21.1	22.9
30,000-99,999 ..	6,111	3,820	2,291	13.9	8.7	5.2
10,000-29,999 ..	4,509	3,021	1,488	10.3	6.9	3.4
Under 10,000 ...	11,372	8,524	2,848	25.9	19.4	6.5
Rural farm	12,836	5,027	7,809	29.3	11.5	17.8
Total	53,611	29,533(1)	24,081(1)	122.3	67.4	54.9
Ontario						
100,000 and over	41,748	8,057	33,691	78.8	15.2	63.6
30,000-99,999 ..	12,594	5,209	7,385	23.8	9.8	13.9
10,000-29,999 ..	13,431	3,438	9,993	25.4	6.5	18.9
Under 10,000 ...	22,515	10,846	11,669	42.5	20.5	22.0
Rural farm	22,079	10,548	11,531	41.7	19.9	21.8
Total	112,367	38,204(1)	74,163(1)	212.1	72.1	140.0

(1) Due to pro rata distribution of "Not Stated" categories, totals differ slightly.

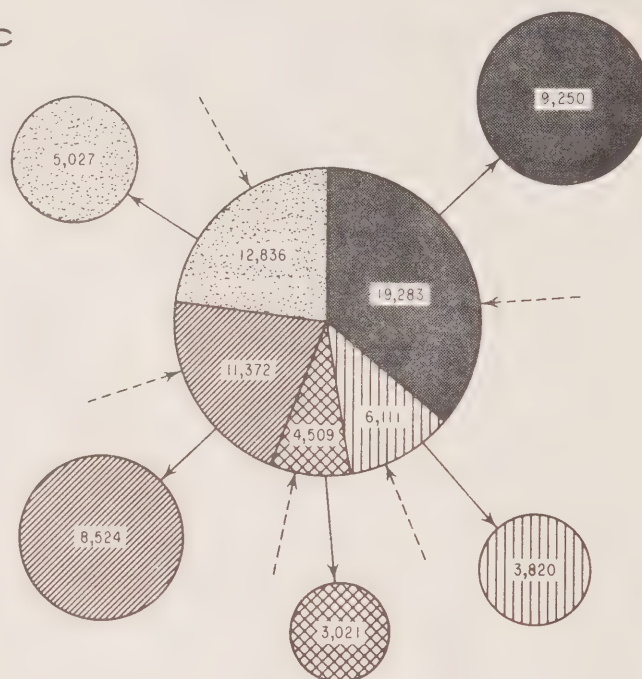
Source: Same as Table 1.

For both the provinces the in-migration rates were the highest, 122 for Quebec and 212 for Ontario. Furthermore, relatively fewer people left this area for other areas between 1956 and 1961: only 30,000 or an out-migration rate of 67.4 for Quebec and 38,000 or an out-migration rate of 72 for Ontario.

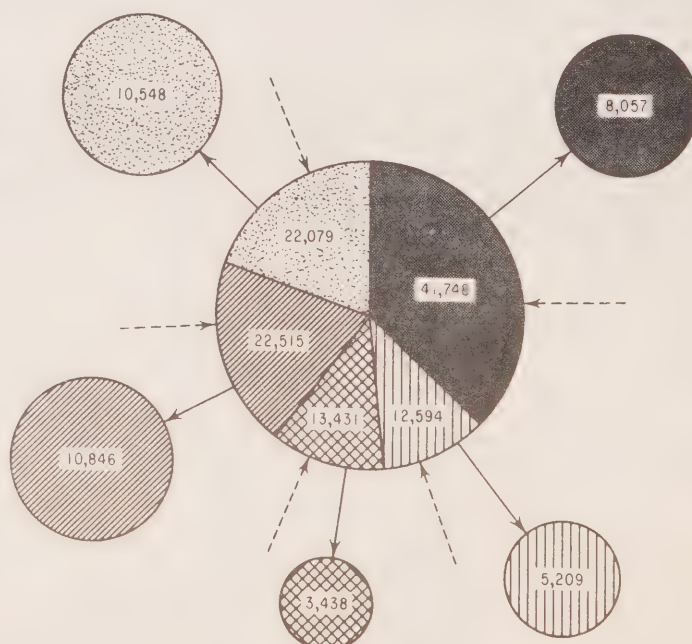
GRAPH 7

OUT-MIGRANTS AND IN-MIGRANTS OF THE RURAL NON-FARM AREA TYPE BY PLACE OF ORIGIN AND DESTINATION, 1956-61, QUEBEC AND ONTARIO

QUEBEC



ONTARIO



LEGEND

AREA TYPE / URBAN CENTRES
IN THOUSANDS

100+

30-99

10-29

-10

R. F.

OUT-MIGRATION

IN-MIGRATION

The predominant in-migration streams for both the provinces were from big cities, rural farm areas and small urban areas (Table 18 and Graph 7). The main destinations of the out-migrants were also to these three areas. While the predominant out-migration in Quebec was to big cities (31.3 per cent), the corresponding stream was to small urban areas in Ontario (28.4 per cent).

The high volume of migration to the rural non-farm areas, particularly from big cities in both the provinces, indicates the tendency for people to move to the suburbs of big urban centres where the land is generally cheaper and the construction of own buildings is not regulated by zoning restrictions.

TABLE 18. Percentage of Out-migrants and In-migrants of the Rural Non-farm Area Type, According to their Place of Destination or Place of Origin, Quebec and Ontario

	100,000 and over	30,000- 99,999	10,000- 29,999	Under 10,000	Rural farm	Total
<u>Quebec</u>						
Out-migrants	31.3	12.9	10.2	28.9	17.0	100.0
In-migrants	36.0	11.4	8.4	21.2	23.9	100.0
<u>Ontario</u>						
Out-migrants	21.1	13.6	9.0	28.4	27.6	100.0
In-migrants	37.2	11.2	12.0	20.0	19.6	100.0

Source: Same as Table 1.

Thus, of the migration streams by the types of areas considered, the net migration is highest for rural non-farm areas in Ontario. In Quebec, areas with over 100,000 population had a higher migration gain than rural non-farm areas. The high in-migration to non-farm areas may be attributed to the concentration of rural non-farm population close to big cities. As Stone has observed, "much of the rural non-farm population is concentrated in and near counties and census divisions containing the larger cities" (Stone, 1967, p. 65).

4.7 Summary

There are two groups in Quebec and Ontario with a positive migration balance: the rural non-farm and the urban areas with 100,000 population and over in Quebec and the rural non-farm and urban areas with population of 30,000 to 99,999 in Ontario. On the other hand, there is still an exodus from the farms in both the provinces, and these people are tending more towards the large urban centres and rural non-farm areas than towards small urban centres. Although one can detect a traditional migration stream from the farms to the small towns, and another from the latter to the large urban centres, the first is not predominant. The "relay town" situation, while it may have been found at one time, seems to be decreasing in importance. The attraction of the big city and its fringes (rural non-farm) is making itself felt everywhere in Quebec and Ontario today.

5. The Attraction of the Different Areas

The purpose of this section is to measure in a more precise way the attraction exerted by each area on other areas for intermunicipal migration. This is done by calculating the indices of attraction for each area. The method used for this purpose is similar to the one used for France by Roland Pressat (1963) and later employed by André Beltramone (1966, p. 26).

5.1 Description of Method

Theoretically, we can divide a given territory such as Quebec into n zones; we can then draw up a table $n \times n$, where the rows represent initial residence (origin) and the columns, the final residence (destination) as shown below.

		<u>Final residence (destination)</u>				
		1	2	i	n	
Initial residence (origin)	1	OP ₁				
	2		OP ₂			
	3					
	i			OP _i		
	n					OP _n

↓
I_i

E_i

The number of persons who did not move, i.e., the non-migrants during the given period (1956-61), is shown on the diagonal OP. In the columns, the figures other than OP represent the number of in-migrants to zone i from other zones (n-1). Similarly, in the rows, the figures other than OP represent the number of out-migrants from zone i to other zones (n-1). The sum of in-migrants will be equal to the sum of out-migrants, representing the total in- or out-migration between the areas considered.

The above presentation helps to measure the intensity of each migration stream on the basis of out-migration rates, and the attractive power of each area from the distribution of out-migrants in the (n-1) receiving areas.

As Pressat states, intensity is a characteristic of the originating area. On the other hand, the distribution of migrants in receiving areas gives an indication of the amount of attraction exerted by the various receiving zones on migrants coming from zone i; the use of this distribution will thus enable us to study each zone from the point of view of a receiving area (Pressat, 1963).

In a general way, we shall measure the force of attraction exerted by a zone k on a zone i, by comparing the percentage of out-migrants from zone i who moved to k with the percentages of out-migrants from i who moved to zones other than k (Pressat, 1963).

An example will help to make certain clarifications and illustrate the computation procedure. The diagram below(2) shows the distribution for 100 out-migrants from each zone by receiving area.

- (2) The figures in this diagram are for men aged 25-29 who were living in Quebec in 1961. In other cases only the zone numbers may be replaced with the corresponding area types.

		Final residence (destination)						
Initial residence (origin)		1	2	3	4	5	6	Total
	1		13.2	11.1	28.6	41.8	5.6	100.0
	2	57.5		5.7	14.9	20.2	1.6	100.0
	3	44.4	14.7		18.4	18.7	3.8	100.0
	4	47.8	11.5	12.3		22.3	6.1	100.0
	5	34.9	13.1	10.1	28.1		13.6	100.0
	6	33.4	9.0	9.0	24.1	24.6		100.0
Attraction index		218.0	61.5	48.3	114.2	127.5	30.7	600.0

The sum of each column provides an attraction index for each zone; it shows the number of in-migrants received by the different zones when each of them has a uniform number of out-migrants equal to 100.

If the out-migrants were equally distributed among the zones with equal probabilities, the indices would all be equal to 100. Thus the zones with indices greater than 100 exert a special attraction; this is the case in zones 1, 4 and 5. Zones 2, 3 and 6, on the contrary, exert a less than average amount of attraction.

If the zones of Quebec and Ontario corresponded to well-defined geographic areas such as county, town, urban area or administrative region, it would be possible to draw a map showing the attraction of each zone by using a scale of colours. However, this is not the case here.

5.2 Results for Quebec and Ontario

The six types of areas enable us to construct a table 6 x 6, from which we can derive the indices of attraction capacities for each group (Table 19). In Quebec, three areas exerted a better than average amount of attraction: the 100,000 and over group, the less than 10,000 and the rural non-farm. The attraction index of the first, 211.7, is by far the highest of the three. In fact, this area type attracts more than 35 per cent of the out-migrants from other groups. In Ontario only two areas, non-farm areas and the 100,000 and over size group, exerted an above-average attraction. A third urban area, the under 10,000 size group, exerted an average attraction.

TABLE 19. Attraction Indices by Area Type for Quebec and Ontario

Place of residence in 1956	Quebec						
	Place of residence in 1961						Total
	100,000 and over	30,000- 99,999	10,000- 29,999	Under 10,000	Rural non- farm	Rural farm	
100,000 and over	—	11.5	9.1	27.6	45.1	6.8	100.0
30,000 to 99,999	55.1	—	5.7	12.2	22.4	4.6	100.0
10,000 to 29,999	42.6	13.3	—	18.3	21.1	4.8	100.0
Under 10,000	48.6	10.9	11.1	—	23.0	6.3	100.0
Rural non-farm	31.3	12.9	10.2	28.9	—	17.0	100.0
Rural farm	34.1	9.6	8.7	22.5	25.9	—	100.0
Attraction index	211.7	58.3	44.8	109.4	137.5	39.4	600.0
	Ontario						
							Total
	100,000 and over	30,000- 99,999	10,000- 29,999	Under 10,000	Rural non- farm	Rural farm	
100,000 and over	—	21.4	9.4	21.6	39.8	7.9	100.0
30,000 to 99,999	44.1	—	6.1	15.5	28.3	6.1	100.0
10,000 to 29,999	34.2	13.7	—	14.1	31.9	6.1	100.0
Under 10,000	33.0	18.3	8.5	—	31.4	8.8	100.0
Rural non-farm	21.1	13.6	9.0	28.4	—	27.6	100.0
Rural farm	22.8	14.8	6.2	20.3	36.1	—	100.0
Attraction index	155.2	81.7	39.2	99.9	167.4	56.5	600.0

Note: The slight discrepancies in the totals are due to the limitations in the adjustment of the data mentioned in Tables 7 and 17.

Source: Same as Table 1.

In Quebec, the index for 100,000 and over size groups was much higher than for other groups. In fact, more than 75 per cent of the out-migrants from each type moved to the 100,000 and over groups and rural non-farm areas. Thus, the attraction index for the 100,000 and over and the rural non-farm groups is a proof of the rapid growth of the metropolitan population owing to a population drain from the rest of Quebec. In 1961 about 53 per cent of the population of Quebec lived in 100,000 and over size groups. In Ontario, the index for the first two size groups varied only slightly; it differed far less than the same index for Quebec. These two areas, i.e., non-farm areas and 100,000 and over size groups absorbed over 53 per cent of the total out-migrants. The attraction index of the 30,000-99,999 group, although lower than average, had a higher attraction power than that for the same group in Quebec.

The indices used here have not taken into account the effect of population size of the area on the calculation of the attraction index. As stated by R. Bachi (1963, p. 458), a region with a large population may be expected to receive a larger proportion of internal migrants than a region with small population: regions with large populations may appear systematically as "attractive", because of the fact that they have large populations. In the case of Quebec and Ontario the group with 100,000 and over population has a large concentration of population.

It is also worthy to note that the 100,000 and over group has the lowest in-migration rate but the highest attraction index. Therefore, it is necessary to adjust this index for the unequal distribution of the population among the six types of areas. The adjustment of the index for population size was done using the procedure described below and the results are presented in Table 20.

TABLE 20. Crude Indices and Net Indices of Attraction for Each Area Type and their Rank, According to Total Population and In-migration Rate, Quebec and Ontario

	Quebec					
	100,000 and over	30,000-99,999	10,000-29,999	Under 10,000	Rural non-farm	Rural farm
Attraction index	211.7	58.3	44.8	109.4	137.5	39.4
Corrected index	54.1	103.6	119.5	135.5	135.5	52.6
Population(1)	1,700,361	232,583	163,229	351,265	438,461	321,732
Rank						
Population	1	5	6	3	2	4
Index	1	4	5	3	2	6
Corrected index	5	4	3	1	1	6
In-migration rate	5	4	2	3	1	6
	Ontario					
	100,000 and over	30,000-99,999	10,000-29,999	Under 10,000	Rural non-farm	Rural farm
Attraction index	155.2	81.7	39.2	99.9	167.4	56.5
Corrected index	40.9	71.8	105.0	129.0	164.5	88.8
Population	1,997,465	595,404	193,908	404,331	529,729	332,422
Rank						
Population	1	2	6	4	3	5
Index	2	4	6	3	1	5
Corrected index	6	5	3	2	1	4
In-migration rate	6	4	3	2	1	5

(1) Population aged 15 and over according to the sample.

Source: Same as Table 1.

The procedure is as follows:

$$\text{Let } I_{100}^C = \frac{I_{100}}{I_T} \times P_{100} = \frac{211.7}{600} \times \frac{100}{53} = .67$$

where

I_{100}^C = the corrected attraction index, 100,000 and over group;

I_{100} = the attraction index for the 100,000 and over group;

I_T = the total attraction index, i.e. the sum of the indices for each group (600);

P_{100} = the proportion of the 100,000 and over group in relation to the total population of Quebec.

We have reduced the results to the same basis as that of the first index, i.e. 600.

Though the crude index is closely linked with the total population of the different area types, the corrected index for the unequal distribution of the population yields a result which is much more closely connected with that obtained from the in-migration rates (Table 20). In Quebec, the most attractive areas would thus be those with less than 10,000 residents and the rural non-farm areas. In Ontario, the rural non-farm areas were still the most attractive place for migration according to both the corrected and uncorrected index; the second place of attraction, however, was the under 10,000 size group and not the 100,000 and over group as shown by the unadjusted index.

6. Summary of Major Findings and Concluding Remarks

This study attempts to fill an important gap in the analysis of intraprovincial migration in Canada. It focuses on a comparative analysis of intraprovincial migration in Quebec and Ontario with special emphasis on intermunicipal migration streams by urban size groups, rural non-farm and rural farm areas, 1956 - 1961. Apart from the geographical proximity and numerical importance of the two provinces, both experienced high mobility of population in 1956-61. The data used are mostly derived from the unpublished migration tabulations of the 1961 Census of Canada.

The data used are subject to a number of limitations which are discussed in Section 2. In addition to the general limitations of the 1961 Census migration data, there were special problems in interpreting the data on intermunicipal migration streams between municipalities of different size groups and moves from one municipality to another within each size group. The main problem was in identifying intermunicipal migration within the same size group. Because of this the analysis of migration streams is confined to migration between one urban size group to another and not from one municipality to another in the same urban area or size group.

The characteristics of migrants examined were sex, age, and marital status. In both the provinces the sex ratios of the total population ($\frac{M}{F}$) were more or less similar in 1961 irrespective of the area considered. However, this pattern did not hold good for the migrants of the two provinces; the propensity to migrate was higher among males in Ontario than in Quebec, particularly in rural areas. The age distribution showed that there was little difference in the age structure of the migrants between the two provinces. The pattern was similar to the rather universal pattern with an excess of adolescents and young adults among migrants.

Data on marital status distribution show that whatever their place of residence in 1961, the proportions of married persons among migrants were higher than those of single persons in both the provinces. The proportions of married among migrants were also higher than the proportion married in the total population of the two provinces.

Because of certain limitations of the data, the analysis of migration streams was confined to intermunicipal migration streams by urban size groups, and type of area, i.e., rural farm and rural non-farm. Except for the 100,000 and over and the 30,000-99,999 size groups, the behaviour of populations in other area types was very much the same in the two provinces. Only the intensity of the migration differential varied from one province to the other. For the first two groups, results obtained in Quebec were the opposite of those for Ontario. Whereas the 100,000 and over size group in Quebec had a positive net migration rate, its counterpart in Ontario had a negative rate. On the other hand, the rate for the 30,000-99,999 group was negative in Quebec and positive in Ontario. The rural non-farm areas gained from migration in both the provinces.

Larger urban centres in Ontario seem to be having difficulties holding on to their population, part of which moves to the rural non-farm areas; this latter area type received the greatest number of in-migrants and had the highest net migration rate both in Quebec and Ontario. It would seem that in Ontario, movement toward the larger urban centres is counterbalanced by an even greater migration stream in the opposite direction. Even though out-migrants from the larger cities were numerous in Quebec, migration toward this area type remained predominant. Furthermore, attraction indices confirm this superiority on the part of larger urban centres in Québec in attracting migrants.

Finally, the migration record was less favourable for the rural farm type in Quebec than in Ontario. This fact cannot be attributed to a greater exodus from the farm in Quebec; on the contrary, Ontario's out-migration rate was higher than Quebec's. However, a greater number of Ontario residents were moving towards the farm regions, particularly those who moved from the larger urban centres and the rural non-farm regions. From this it may be assumed that the farm environment is becoming more rapidly urbanized in Ontario than in Quebec (Table 20). On the other hand, there is still an exodus from the farms in both the provinces, and these people are moving more towards the large urban centres and rural non-farm areas than towards small urban centres.

Four area types in Quebec exerted an attraction which was definitely above average; this was true of only three areas in Ontario. In both provinces, the adjusted index which took into account the effect of the population size of the area, type and lowest for the larger urban centres and the farm regions.

In Quebec, the rural exodus showed an out-migration rate of 81 per 1,000 population; in Ontario, the same rate stood at 77. The attraction which the rural regions has for city dwellers was far greater in Ontario than in Quebec; the urban-rural in-migration rate was 128 for Ontario as opposed to 65 for Quebec. In Quebec, the urban-rural migration resulted in a loss of migration for the urban areas by a net migration rate of -17. In Ontario, the traditional pattern had disappeared; the urban-rural population exchange resulted in a net gain for the rural areas by a net migration rate of 50. Thus, the notable pattern in the over-all migration between rural and urban areas in the two provinces was the tendency among the population residing in urban areas to move to rural areas, particularly in Ontario.

As observed by Charbonneau and Légaré (p. 238), in Canada the movement of rural residents toward the city cannot even make up for the stream of city dwellers returning to rural life. The urban-rural migration exchange resulted in a gain of some 50,000 for rural areas during the five-year period 1956-61. Do we observe the same phenomenon in Quebec and in Ontario? In Quebec, the traditional trend was continuing; the urban-rural migration differential was still unfavourable for the rural areas. This was not the case in Ontario.

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